

AMENDMENT TO THE CLAIMS

1. (Previously presented) A system comprising:

a mechanical arm;
an attachment member tiltably mounted on the mechanical arm about a pivot joint,
wherein the attachment member has a range of tilt about the pivot joint bounded
by an extreme forward orientation and an extreme rearward orientation;
an actuator operably connected to the attachment member for powering the attachment
member to tilt about the pivot joint;
a power system operably connected to the actuator;
an electronic control operatively connected to the power system, and comprising an
automatic vibration mechanism for causing the attachment member to vibrate
automatically in response to an activation signal; and
an operator interface in operable communication with the electronic control;
wherein the system comprises a default state, and an activation state for causing the
activation signal; and
wherein the system has a predetermined segment of the range of tilt of the attachment
member that is comprised in the activation state, and a remainder of the range of
tilt comprised in the default state, wherein the attachment member being
selectably oriented within the predetermined segment of the range of tilt
comprised in the activation state is a necessary condition for causing the
activation signal.

2. (Canceled)

3. (Previously presented) The system of claim 1, wherein the system also has a predetermined
length of time, comprised in the activation state, for the attachment member to be oriented
within the predetermined segment of the range of tilt, wherein the attachment member being

oriented within the predetermined segment of the range of tilt for the predetermined length of time is a further necessary condition for causing the activation signal.

4. (Previously presented) The system of claim 1, wherein the predetermined segment of the range of tilt includes the extreme forward orientation.
5. (Previously presented) The system of claim 1, wherein the attachment member has a range of lift above a projected ground surface bounded by a minimum lift and a maximum lift, and wherein the system also has a predetermined segment of the range of lift of the attachment member that is comprised in the activation state, wherein the attachment member being positioned within the predetermined segment of the range of lift is a further necessary condition for causing the activation signal.
6. (Previously presented) The system of claim 5, wherein the system also has a predetermined length of time, comprised in the activation state, for the attachment member to be positioned within the predetermined segment of the range of lift, wherein the attachment member being positioned within the predetermined segment of the range of lift for the predetermined length of time is a further necessary condition for causing the activation signal.
7. (Original) The system of claim 5, wherein the predetermined segment of the range of lift includes the maximum lift.
8. (Previously presented) A system comprising:
 - a mechanical arm;
 - an attachment member tiltably mounted on the mechanical arm about a pivot joint;
 - an actuator operably connected to the attachment member for powering the attachment member to tilt about the pivot joint;
 - a power system operably connected to the actuator;

an electronic control operatively connected to the power system, and comprising an automatic vibration mechanism for causing the attachment member to vibrate automatically in response to an activation signal; and
an operator interface in operable communication with the electronic control; and
wherein the system comprises a default state, and an activation state for causing the activation signal;
wherein the attachment member has a range of lift above a projected ground surface bounded by a minimum lift and a maximum lift, and wherein the activation state comprises the attachment member being positioned within a predetermined segment of the range of lift;
wherein the attachment member has a range of lift above a projected ground surface bounded by a minimum lift and a maximum lift, and a range of tilt about the pivot joint bounded by an extreme forward orientation and an extreme rearward orientation, and wherein the activation state comprises the attachment member being both positioned within a predetermined segment of the range of lift, and oriented within a predetermined segment of the range of tilt.

9. (Original) The system of claim 8, wherein the activation state also comprises the attachment member being positioned within the predetermined segment of the range of lift and oriented within the predetermined segment of the range of tilt, for a predetermined length of time.
10. (Previously presented) The system of claim 1, wherein the activation state comprises the attachment member undergoing a minimum load, and wherein the attachment member undergoing the minimum load is a further necessary condition for causing the activation signal.
11. (Original) The system of claim 1, wherein the activation state comprises the attachment member undergoing a minimum load, and wherein the minimum load for the activation state is detected by a mechanical strain gauge.

12. (Currently amended) A system comprising:

a mechanical arm;

an attachment member tiltably mounted on the mechanical arm about a pivot joint,
wherein the attachment member has a range of tilt about the pivot joint bounded
by an extreme forward orientation and an extreme rearward orientation;

an actuator operably connected to the attachment member for powering the attachment
member to tilt about the pivot joint;

a power system operably connected to the actuator;

an electronic control operatively connected to the power system, and comprising an
automatic vibration mechanism for causing the attachment member to vibrate
automatically in response to an activation signal; and

an operator interface in operable communication with the electronic control; and

wherein the system comprises a default state, and an activation state for causing the
activation signal;

wherein the activation state comprises the attachment member being selectably oriented
within a predetermined segment of the range of tilt, and the attachment member
undergoing a minimum load; and

wherein the minimum load for the activation state is detected by a hydraulic pressure
gauge.

13. (Previously presented) The system of claim 1, wherein the activation state comprises the
attachment member undergoing a minimum load, and wherein the activation state also
comprises a position and an orientation of the attachment member that are consistent with
digging.

14. (Previously presented) The system of claim 1, wherein the activation state comprises the
attachment member undergoing a minimum load, and wherein the activation state also

comprises a position and an orientation of the attachment member that are consistent with packing.

15. (Previously presented) The system of claim 8, wherein the operator interface comprises a push button, and the activation state comprises the push button being in a depressed position.
16. (Original) The system of claim 15, wherein the push button is disposed on a joystick.
17. (Previously presented) The system of claim 8, wherein the operator interface comprises a joystick, and the activation state comprises the joystick being oriented in a predetermined orientation for a predetermined amount of time.
18. (Previously presented) The system of claim 8, wherein the operator interface comprises a joystick, and the activation state comprises the joystick being jigged.
19. (Previously presented) The system of claim 1, further comprising a backhoe mounted on the attachment member.
20. (Previously presented) The system of claim 1, further comprising a bucket mounted on the attachment member.
21. (Previously presented) A system comprising:
 - a mechanical arm;
 - an attachment member tiltably mounted on the mechanical arm about a pivot joint;
 - an actuator operably connected to the attachment member for powering the attachment member to tilt about the pivot joint;
 - a power system operably connected to the actuator;
 - an electronic control operatively connected to the power system, and comprising an automatic vibration mechanism for causing the attachment member to vibrate

automatically in response to an activation signal, wherein the automatic vibration mechanism comprises an algorithm; and
an operator interface in operable communication with the electronic control; and
wherein the system comprises a default state, and an activation state for causing the activation signal.

22. (Original) The system of claim 1, wherein the actuator is hydraulically powered, and the power system provides hydraulic power.
23. (Original) The system of claim 1, wherein the actuator is electrically powered, and the power system provides electrical power.
24. (Previously presented) The system of claim 8, wherein the actuator comprises a cylinder, and a piston slidably engaged within the cylinder.
25. (Original) The system of claim 1, further comprising a frame supported by a plurality of ground engaging wheels, wherein the mechanical arm is operably coupled to the frame.
26. (Original) The system of claim 1, further comprising a frame supported by a plurality of ground engaging tracks, wherein the mechanical arm is operably coupled to the frame.
27. (Previously presented) The system of claim 8, wherein the operator interface comprises a console mounted on a frame to which the mechanical arm is coupled.
28. (Previously presented) The system of claim 8, wherein the operator interface comprises a remote control console.
- 29-30. (Canceled)

31. (Previously presented) The power machine of claim 34, wherein the predetermined segment of the range of tilt includes the extreme forward orientation.
32. (Canceled)
33. (Previously presented) The power machine of claim 34, wherein the predetermined segment of the range of lift includes the maximum lift.
34. (Previously presented) A power machine, comprising:
- a frame;
 - a plurality of ground engaging members supporting the frame;
 - an engine operably connected to the ground engaging members;
 - a mechanical arm operably coupled to the frame;
 - an attachment member tiltably mounted on the mechanical arm about a pivot joint;
 - an actuator operably connected to the attachment member for powering the attachment member to tilt about the pivot joint;
 - a power system operably connected to the actuator;
 - an electronic control operatively connected to the power system, and comprising an automatic vibration mechanism for causing the attachment plate to vibrate automatically in response to an activation signal; and
 - an operator interface in operable communication with the electronic control;
- wherein the power machine comprises a default state, and an activation state for causing the activation signal; and
- wherein the attachment member has a range of lift above a projected ground surface bounded by a minimum lift and a maximum lift, and a range of tilt about the pivot joint bounded by an extreme forward orientation and an extreme rearward orientation, and wherein the activation state comprises the attachment member being both positioned within a predetermined segment of the range of lift, and

oriented within a predetermined segment of the range of tilt, for a predetermined length of time.

- 35. (Previously presented) The power machine of claim 34, wherein the operator interface comprises a push button, and the activation state comprises the push button being in a depressed position.
- 36. (Previously presented) The power machine of claim 34, wherein the operator interface comprises a joystick, and the activation state comprises the joystick being oriented in a predetermined orientation for a predetermined amount of time.
- 37. (Previously presented) The power machine of claim 34, wherein the operator interface comprises a joystick, and the activation state comprises the joystick being jiggled.
- 38. (Previously presented) The power machine of claim 34, further comprising a backhoe mounted on the attachment member.
- 39. (Previously presented) The power machine of claim 34, further comprising a bucket mounted on the attachment member.
- 40. (Previously presented) The power machine of claim 34, wherein the actuator is hydraulically powered, and the power system provides hydraulic power.
- 41. (Previously presented) The power machine of claim 34, wherein the actuator is electrically powered, and the power system provides electrical power.
- 42. (Previously presented) The power machine of claim 34, wherein the ground engaging members comprise wheels.

43. (Previously presented) The power machine of claim 34, wherein the ground engaging members comprise tracks.

44-49. (Canceled)